

Form PTO-1449 (Modified)

U.S. Department of Commerce
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Atty. Docket No.

28111/32729D

Serial No.

09/416,902

Applicant

McCafferty, J. et al.

Filing Date

October 13, 1999

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INFORMATION DISCLOSURE STATEMENT

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U.S. PATENT DOCUMENTS

*Examiner Initials		Document Number	Issue Date	Name	Class	Subclass	Filing Date If Appropriate
PP	A1	4,593,002	06/03/86	Dulbecco	435	172.3	
	A2	4,816,397	03/28/89	Boss et al.	435	68	
	A3	4,946,778	08/07/90	Ladner et al.	435	69.6	
	A4	5,091,513	02/25/92	Huston et al.	530	387	
	A5	5,223,409	06/29/93	Ladner et al.	435	69.7	
	A6	5,403,484	04/04/95	Ladner et al.	435	235.1	
	A7	5,427,908	06/27/95	Dower et al.	435	5	
	A8	5,658,727	08/19/97	Barbas et al.	435	6	
	A9	5,688,666	11/18/97	Bass et al.	435	69.4	
	A10	5,750,373	05/12/98	Garrard et al.	435	69.4	
	A11	5,759,817	06/02/98	Barbas, C.	435	69.7	
	A12	5,770,356	06/23/98	Light et al.	435	5	
	A13	5,780,279	07/14/98	Matthews et al.	435	172.3	
	A14	5,821,047	10/13/98	Garrard et al.	435	5	
	A15	5,846,765	12/08/98	Matthews et al.	435	69.1	
	A16	5,849,500	12/15/98	Breitling et al.	435		

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FOREIGN PATENT DOCUMENTS

*Examiner Initials		Document Number	Publication Date	Country	Class	Subclass	Translation	
							Yes	No
P	B1	WO 83/02393	07/21/83	WIPO				
	B2	EP 2 137 631	10/10/84	EP 0				
	B3	EP 0 168 933	01/22/86	EP 0				
	B4	WO 88/06630	09/07/88	WIPO				
	B5	WO 88/09344	12/01/88	WIPO				
	B6	EP 0 324 162 A1	12/24/88	EP 0				
	B7	AU-B-27617/88	07/06/89	AU				
	B8	WO 90/02809	03/22/90	WIPO				
	B9	WO 90/05144	05/17/90	WIPO				
	B10	WO 90/14424	11/29/90	WIPO				
	B11	WO 90/14430	11/29/90	WIPO				
	B12	WO 90/14443	11/29/90	WIPO				
	B13	WO 91/10737	07/25/91	WIPO				
	B14	WO 91/17271	11/14/91	WIPO				
	B15	WO 92/06204	04/16/92	WIPO				
	B16	WO 92/09690	06/11/92	WIPO				
	B17	WO 92/18619	10/29/92	WIPO				

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	C12	Boyle, W., "An Extension of the ⁵¹ Cr-Release Assay for the Estimation of Mouse Cytotoxins," <i>Transplantation</i> , 6(6):761-764 (1968).
	C13	Branden, C. <i>et al.</i> , in <i>Introduction to Protein Structure</i> , Garland Publishing, Inc., New York and London, pp.26-29 (1991).
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	C17	Carter, P. <i>et al.</i> , "Improved oligonucleotide site-directed mutagenesis using M13 vectors" <i>Nucl. Acids Res.</i> , 13(12):4431-4443 (1985).
	C18	Casali, P. <i>et al.</i> , "Human Monoclonals from Antigen-Specific Selection of B Lymphocytes and Transformation by EBV," <i>Science</i> , 234:476-479 (October, 1986).
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	C23	Choo, Y. <i>et al.</i> , "In vivo repression by a site-specific DNA-binding protein designed against an oncogenic sequence," <i>Nature</i> , 372:642-645 (1994).
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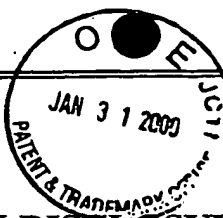
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	C89	Rasched, I. et al., "Ff Coliphages: Structural and Functional Relationships," <i>Microbiological Reviews</i> , 50(4):401-427 (1986).
	C90	Riechmann, L. et al., "Reshaping human antibodies for therapy," <i>Nature</i> , 332:323-327 (March, 1988).
✓	C91	Rossomando, E.F. et al., "Studies on the Bacteriophage f1 I. Alkali-induced Disassembly of the Phage into DNA and Protein," <i>J. Mol. Biol.</i> , 36:387-399 (1968).

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Form PTO-1449 (Modified)

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Auty. Docket No.

28111/32729D

Serial No.

09/416,902

Applicant

McCafferty, J. *et al.*

Filing Date

October 13, 1999

Group

1643

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

pp	C92	Saiki, R.K. <i>et al.</i> , "Primer-Directed Enzymatic Amplification of DNA with a Thermostable DNA Polymerase," <i>Science</i> , 239:487-491 (January, 1988).
	C93	Sambrook <i>et al.</i> , Molecular Cloning: A Laboratory Manual, 4.13-4.14, 4.17-4.19, 4.46 and A.12 (1989).
	C94	Sastry, L. <i>et al.</i> , "Cloning of the immunological repertoire in <i>Escherichia coli</i> for generation of monoclonal catalytic antibodies: Construction of a heavy chain variable region-specific cDNA library," <i>Proc. Natl. Acad. Sci., USA</i> , 86:5728-5732 (August, 1989).
	C95	Schaaper, R.M. <i>et al.</i> , " <i>Escherichia coli</i> mutT Mutator Effect during <i>in Vitro</i> DNA Synthesis," <i>J. Biol. Chem.</i> , 262(34):16267-16270 (December, 1987).
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	C102	Smith, G.P., "Filamentous Phage Assembly: Morphogenetically Defective Mutants That Do Not Kill the Host," <i>Virology</i> , 167:156-165 (1988).
✓	C103	Stanfield, R.L. <i>et al.</i> , "Crystal Structures of an Antibody to a Peptide and Its Complex with Peptide Antigen at 2.8 Å," <i>Science</i> , 248:712-719 (1990).

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Form PTO-1449 (Modified)

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Patent and Trademark OfficeAtty. Docket No.
28111/32729DSerial No.
09/416,902Applicant
McCafferty, J. *et al.*Filing Date
October 13, 1999Group
1643

INFORMATION DISCLOSURE STATEMENT

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

pp	C104	Stengele, I. <i>et al.</i> , "Dissection of Functional Domains in Phage fd Adsorption Protein Discrimination between Attachment and Penetration Sites," <i>J. Mol. Biol.</i> , 212(1):143-149 (1990).
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	C113	Ward, E.S. <i>et al.</i> , "Binding activities of a repertoire of single immunoglobulin variable domains secreted from <i>Escherichia coli</i> ," <i>Nature</i> , 341:544-546 (October, 1989).
	C114	Webster, R.E. <i>et al.</i> , "Morphogenesis of the Filamentous Single-stranded DNA Phages," In: <i>The Single Stranded DNA Phages</i> , Cold Spring Harbor Laboratory Press, pp. 557-569 (1978).
✓	C115	White, M. R. H. <i>et al.</i> , "Imaging of Firefly Luciferase Expression in Single Mammalian Cells Using High Sensitivity Charge-Coupled Device Cameras," <i>Technique (PHILA)</i> , 2 (4) 194-201 (1990).

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Any. Docket No.

28111/32729D

Serial No.

09/416,902

Applicant

McCafferty, J. *et al.*

Filing Date

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Group

1643

INFORMATION DISCLOSURE STATEMENT

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

P	C116	Williams, A.F. <i>et al.</i> , "The Immunoglobulin Superfamily - Domains for Cell Surface Recognition ^{1,2} ," <i>Ann. Rev. Immunol.</i> , 6:381-405 (1988).
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J	C118	Yanisch-Perron, C. <i>et al.</i> , "Improved M13 phage cloning vectors and host strains: nucleotide sequences of the M13mp18 and pUC19 vectors," <i>Gene</i> , 33:103-119 (1985).
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		Application Number	09/416,902		
		Filing Date	October 13, 1999		
		First Named Inventor	McCafferty		
		Group Art Unit	1643		
		Examiner Name	To be assigned		
Sheet	1	of	8	Attorney Docket Number	213839-00009

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U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
pp	A1	US-6,331,415	12-18-2001	Cabilly et al.	
	A2	US patent application 07/240,160	03-22-1990	Ladner et al. <i>Abandoned application</i>	

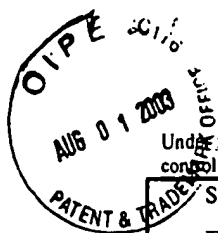
FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
pp	B1	WO 88/01649	03-10-1988	Ladner et al.		
	B2	GB9022845.3	10-19-1990	Medical Research Council		
	B3	GB9024503.6 patent application	11-12-1990	O'Brien		
	B4	GB 9104744.9 patent application	03-06-1991	O'Brien		
	B5	EP-A-0 368 684	05-16-1990	Winter		
	B6	GB9015198.6 priority document	07-10-1990	O'Brien		
	B7	GB 9022845.3 priority document	10-19-1990	Medical Research Council		
	B8	GB 9104744.9 priority document	03-06-1991	O'Brien		
	B9	GB9110549.4 priority document	05-15-1991	O'Brien		
✓	B10	EP-B-0 349 578 B1	11-30-1994	Ladner et al.		

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Substitute for form 1449B/PTO		Complete if Known	
		Application Number	09/416,902
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Filing Date	October 13, 1999
		First Named Inventor	McCafferty
		Group Art Unit	1643
		Examiner Name	To be assigned
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher city and/or country where published	T ²
PP	C1	Interlocutory Decision in Opposition Proceedings to the European Patent EP-B-0589877 dated April 15, 2002 (reference number SMW/CP9503921)	
	C2	Notice of Appeal to the European Patent EP-B-0589877 from Dyax Corp., filed June 17, 2002	
	C3	Communication from EPO on Notice of Appeal filed by Dyax, issued October 21, 2002	
	C4	Notice of Appeal to the European Patent EP-B-0589877 from BioInvent Therapeutic AB, filed June 14, 2002	
	C5	Appeal No. T0639/02-334 from BioInvent Therapeutic AB to the European Patent EP-B-0589877, filed August 22, 2002	
	C6	Notice of Appeal to the European Patent EP-B-0589877 from MorphoSys AG, filed June 20, 2002, and Grounds of the Appeal, filed August 22, 2002	
	C7	Notice of Appeal, filed June 24, 2002, and Grounds of Appeal, filed August 22, 2002, from Cambridge Antibody Technology Limited against the Decision of the Opposition Division	
	C8	Notice of Opposition to the European Patent EP-B-0589877 from BioInvent International AB, filed October 24, 2002	
	C9	Document D80 in Appeal No. T0639/02-334: HHS' Freedom of Information Act (FOIA) regulations: table of contents, 5.1, 5.2, 5.3, 5.5, 5.21, 5.22, 5.24, 5.31, 5.32, 5.33, 5.34, 5.35, 5.51, 5.61 and 5.65	
	C10	Document D81 in Appeal No. T0639/02-334: Smith Declaration	
✓	C11	Document D82 in Appeal No. T0639/02-334: Copy of Grant Application GM 41478 and renewal applications supplied by the DHH	

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				Application Number	09/416,902
				Filing Date	October 13, 1999
				First Named Inventor	McCafferty
				Group Art Unit	1643
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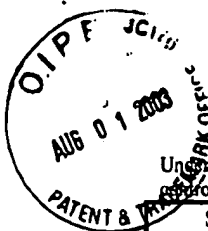
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	C13	Document D85 in Appeal No. T0639/02-334: Proprietor's letter of November 12, 1997, and amended claims	
	C14	Document D86 in Appeal No. T0639/02-334: EP 0774 511 A1	
	C15	Document D87 in Appeal No. T0639/02-334: Proprietor's letter of November 15, 2000	
	C16	Document D88 in Appeal No. T0639/02-334: Grounds of Appeal, dated August 22, 2002, from present opponent in opposition proceedings against EP 0589 877	
	C17	Document D89 in Appeal No. T0639/02-334: OD's Written Interlocutory Decision in opposition proceedings against EP 0 589 877	
	C18	Document D90 in Appeal No. T0639/02-334: Marvin & Hohn (1969). Bacteriological Rev 33(2), 172-209	
	C19	Notice of Opposition to the European Patent EP-B-0589877 from Crucell Holland B.V., filed October 30, 2002	
	C20	Document D13: Communication of the European Office of June 28, 2001	
	C21	Document D27: Details of Smith Grant application and second and third year renewals thereof as provided by the DHHS in response to a Freedom to Information Act (FOIA) request	
	C22	Notice of Opposition to the European Patent EP-B-0589877 from Dyax Corp.	
	C23	Document D1: EPO register print-out for the patent application with file history information	
	C24	Document D3: Claims filed with the divisional application	
	C25	Document D7: Pluckthun and Skerra, "Expression of functional antibody Fv and Fab fragments in <i>Escherichia coli</i> ", <i>Methods in Enzymology</i> , Vol. 178: 497-515 (1989)	
✓	C26	Notice of Opposition to the European Patent EP-B-0589877 from MorphoSys, filed October 30, 2002	

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		Filing Date	October 13, 1999		
		First Named Inventor	McCafferty		
		Group Art Unit	1643		
		Examiner Name	To be assigned		
Sheet	4	of	8	Attorney Docket Number	213839-00009

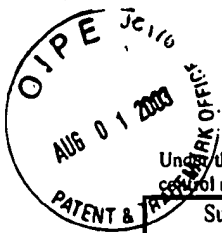
pp	C27	Document D1: Genentech, US Patent Application 07/621,667, priority document to EP 92902109.5	
	C28	Opposition to European patent EP-B-0589877, cited opposition document D2: Nelson et al. "Filamentous phage DNA cloning vectors: a noninfective mutant with a nonpolar deletion in gene III", <i>Virology</i> 108: 338-350 (1981)	
	C29	Opposition to European patent EP-B-0589877, cited opposition document D3: McCoy and Khorana "Introduction and characterization of amber mutations in the bacteriorhodopsin gene", <i>J. Bio. Chem.</i> 258: 8456-8461 (1983)	
	C30	Opposition to European patent EP-B-0589877, cited opposition document D5: Bullock et al. "XL1-blue: a high efficiency plasmid transforming <i>recA</i> Escherichia coli strain with beta-galactosidase selection", <i>Bio Techniques</i> 5: 376-378 (1987)	
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	C32	Opposition to European patent EP-B-0589877, cited opposition document D15: Parmley and Smith "Filamentous fusion phage cloning vectors for the study of epitopes and design of vaccines", <i>Adv. Exp. Med. Biol.</i> 251: 215-218 (1989)	
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	C34	Opposition to European patent EP-B-0589877, cited opposition document D26: Scott and Smith "Searching for peptide ligands with an epitope library", <i>Science</i> 249: 386-389 (1990)	
✓	C35	Opposition to European patent EP-B-0589877, cited opposition document D27: Devlin et al. "Random peptide libraries: a source of specific protein binding molecules", <i>Science</i> 249: 404-405 (1990)	

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				Application Number	09/416,902
				Filing Date	October 13, 1999
				First Named Inventor	McCafferty
				Group Art Unit	1643
				Examiner Name	To be assigned
Sheet	5	of	8	Attorney Docket Number	213839-00005

PP	C36	Opposition to European patent EP-B-0589877, cited opposition document D37: Markland et al. "Design, construction and function of a multicopy display vector using fusions to the major coat protein of bacteriophage M13", <i>Gene</i> 109: 13-19 (1991)	
	C37	Opposition to European patent EP-B-0589877, cited opposition document D38: Roberts et al. "Directed evolution of a protein: selection of potent neutrophil elastase inhibitors displayed on M13 fusion phage", <i>Proc. Natl. Acad. Sci. USA</i> 89: 2429-2433 (1992)	
	C38	Opposition to European patent EP-B-0589877, cited opposition document D39: Glockshuber et al. "The disulfide bonds in antibody variable domains: effects on stability, folding in vitro, and functional expression in escherichia coli", <i>Biochemistry</i> 31: 1270-1279 (1992)	
	C39	Opposition to European patent EP-B-0589877, cited opposition document D41: Kay et al. "Phage display of peptides and proteins", <i>A Laboratory Manual</i> (1996)	
	C40	Opposition to European patent EP-B-0589877, cited opposition document D42: Proba et al. "A natural antibody missing a cysteine in Vh: consequences for thermodynamic stability and folding", <i>J. Mol. Biol.</i> 265: 161-172 (1997)	
	C41	Opposition to European patent EP-B-0589877, cited opposition document D43: Proba et al. "Antibody scFv fragments without disulfate bonds made by molecular evolution", <i>J. Mol. Biol.</i> 275: 245-253 (1998)	
	C42	Opposition to European patent EP-B-0589877, cited opposition document D44: Letter of 18 November 1992 to EPO in prosecution of EP-B-0 349 578	
	C43	Opposition to European patent EP-B-0589877, cited opposition document D45: Page 3 of EPO letter of 19 October 1993 in prosecution of EP-B-0 768 377	
✓	C44	Opposition to European patent EP-B-0589877, cited opposition document D46: Letter of 22 September 1994 to EPO in prosecution of EP-B-0 768 377	

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				Filing Date	October 13, 1999
				First Named Inventor	McCafferty
				Group Art Unit	1643
				Examiner Name	To be assigned
Sheet	6	of	8	Attorney Docket Number	213839-00009

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pp	C45	Opposition to European patent EP-B-0589877, cited opposition document D47: Extract from OD Decision in opposition proceedings against EP-B-0 201 184, 1995	
	C46	Opposition to European patent EP-B-0589877, cited opposition document D48: Letter of 14 February 1996 to EPO in prosecution of EP-A-0 527 839	
	C47	Opposition to European patent EP-B-0589877, cited opposition document D49: the Boards of Appeal of the European Patent Office decision of 8 May 1996, case number T694/92 - 3.3.4	
	C48	Opposition to European patent EP-B-0589877, cited opposition document D50: Extract from opposition proceeding against EP-B-0 349 578 (1996)	
	C49	Opposition to European patent EP-B-0589877, cited opposition document D51: Extract from OD Decision in proceedings against EP-B-0 349 578 (1998)	
	C50	Opposition to European patent EP-B-0589877, cited opposition document D53: Declaration of professor sir Aaron Klug, Ph.D. with exhibits, (23 June 1998)	
	C51	Opposition to European patent EP-B-0589877, cited opposition document D54: Scott preprint, date of availability to public unproven.	
	C52	Opposition to European patent EP-B-0589877, cited opposition document D55: Smith grant application, date of availability to public unproven.	
	C53	Opposition to European patent EP-B-0589877, late filed document D56: claim for infringement of 24 September 1998	
	C54	Opposition to European patent EP-B-0589877, late filed document D58: McConnell et al. "Constrained peptide libraries as a tool for finding mimotopes", Gene 151: 115-118 (1994).	
	C55	Opposition to European patent EP-B-0589877, late filed document D59: two chapters of "Lambda II" (eds. Hendrix et al.) Cold Spring Harbour Laboratory, Cold Spring Harbour, New York, 19983: "A Beginner's Guide to Lambda Biology" (Arber) and "Tail Assembly and Injection" (Katsura)	

Examiner Signature	P. Ponnalun	Date Considered	7/18/05
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¹ Applicant's unique citation designation number (optional). ² Applicant is to place mark here if English language Translation is attached.

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Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known	
		Application Number	09/416,902
		Filing Date	October 13, 1999
		First Named Inventor	McCafferty
		Group Art Unit	1643
		Examiner Name	To be assigned
Sheet	7	of	8
		Attorney Docket Number	213839-00009

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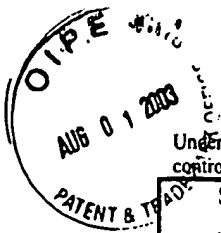
PP	C56	Opposition to European patent EP-B-0589877, late filed document D60: Parmley & Smith "Filamentous fusion phage cloning vectors for the study of epitopes and design vaccines", <i>Adv. Exp. Med. Biol.</i> 251: 251-8 (1989). The document was not admitted to the proceedings.	
	C57	Opposition to European patent EP-B-0589877, late filed document D63: Declaration of William D. Huse, MD, Ph.D. (17 August 1999). The document was not admitted to the proceedings.	
	C58	Opposition to European patent EP-B-0589877, late filed document D66: Crissman & Smith, "Gene-III protein of filamentous phages: evidence for a carboxyl-terminal domain with a role in morphogenesis", <i>Virology</i> 132: 445-455 (1994).	
	C59	Opposition to European patent EP-B-0589877, late filed document D67: Declaration of Dr. Viia Valge-Archer (3 May, 2000)	
	C60	Opposition to European patent EP-B-0589877, late filed document D68: Declaration of Dr. Hiroshi Ueda (3 May, 2000)	
	C61	Opposition to European patent EP-B-0589877, late filed document D69: First Declaration of Dr. Rachel B. Kent (4 February, 2000). The document was objected to by patentees.	
	C62	Opposition to European patent EP-B-0589877, late filed document D71: letter of patentees filed at USPTO on 16 July 1996. The document was objected to by patentees.	
	C63	Opposition to European patent EP-B-0589877, late filed document D72: letter of patentees filed at USPTO on 6 March 1997. The document was objected to by patentees.	
	C64	Opposition to European patent EP-B-0589877, late filed document D73: Opposition by CAT against EP-B-0 564 531. The document was objected to by patentees.	
	C65	Opposition to European patent EP-B-0589877, late filed document D74: Decision of EPOD on EP-B-0 201 184. The document was objected to by patentees.	

Examiner Signature	P. Ponnalun	Date Considered	7/18/00
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Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known			
		Application Number	09/416,902		
		Filing Date	October 13, 1999		
		First Named Inventor	McCafferty		
		Group Art Unit	1643		
		Examiner Name	To be assigned		
Sheet	8	of	8	Attorney Docket Number	213839-00009

PP	C66	Opposition to European patent EP-B-0589877, late filed document D75: Declaration of Prof. Andreas Plückhun. The document was objected to by patentees.	
	C67	Opposition to European patent EP-B-0589877, late filed document D76: Notice of grant awarded to Smith grant application. The document was objected to by patentees.	
	C68	Opposition to European patent EP-B-0589877, late filed document D77: Endemann and Model "Location of filamentous phage minor coat proteins in phage and in infected cells", J. Mol. Biol. 250: 496-506 (1995). The document was objected to by patentees.	
	C69	Opposition to European patent EP-B-0589877, late filed document D79: Extract from MorphoSys website.	
	C70	Opposition to European patent EP-B-0589877, late filed document D80: Written Decision dated 26 May 2000 to revoke EP-B-0436597.	
✓	C71	Opposition to European patent EP-B-0589877, late filed document D81: 2nd Declaration of Dr. Viia Valge-Archer (31 May, 2000).	

Examiner Signature	<i>P. Ponnaluri</i>	Date Considered	<i>7/18/05</i>
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SHEET 1 of 1

Supplemental Form PTO-1449 (Modified)

U.S. Department of Commerce
Patent and Trademark OfficeAtty. Docket No.
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09/416,902SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENTApplicant
McCafferty et al.Filing Date
October 13, 1999

Group 1643

(Use several sheets if necessary)

U.S. PATENT DOCUMENTS

*Examiner Initials		Document Number	Issue Date	Name	Class	Subclass	Filing Date If Appropriate
PP	A17	5,985,588	11/16/99	Breitling et al.	435	7.8	

FOREIGN PATENT DOCUMENTS

*Examiner Initials		Document Number	Publication Date	Country	Class	Subclass	Translation	
							Yes	No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

EXAMINER

P. Ponnaluri

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